

Extra Information  
5/18/09

**Maryjane Kenney**

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**From:** Tom Michelman [tmichelman@comcast.net]  
**Sent:** Monday, May 18, 2009 1:09 AM  
**To:** Board of Selectmen; Paulina Knibbe (comcast); Steve Ledoux; Doug Halley; Stephen Anderson; okunj@oto-env.com  
**Cc:** Jane Ceraso  
**Subject:** From Mary Michelman, re: WR Grace; May 18 BOS meeting  
**Attachments:** LF Area Section 4 Draft ACES Comments May\_16\_2009.doc

Hi,

Would the Town please comment on the modeling section, (Section 4), of the WR Grace Landfill Area Groundwater Pre-Design Results Report, that we just received?

This critical section of the report was emailed to the Acton stakeholders on Friday, May 15, 2009. EPA will hold a stakeholder's conference call on Tuesday, May 19, 2009, and our comments are due to EPA on Tuesday, May 26, 2009. The modeling section that was submitted addresses capture zones, but does not directly address mass removal or cleanup times.

**Overall concern:**

An overall concern is the need to increase contaminant removal in the Landfill Area, (through the installation of additional extraction wells??), especially given unexpectedly low yields in three of the four extraction wells. These three wells, WLF, SWLF-1, and SELF-1 are sited in the core of the most contaminated areas, and together yield approximately **15gpm**, rather than the anticipated **53gpm**.

- Would the Town please consider requesting that EPA require an increase in contaminant removal, through the installation of additional extraction wells or other means? (Increased mass removal, should lead to shorter cleanup times, a critical factor in the cleanup selection for the Southwest Landfill Area in the ROD (See ROD, p. 52, p.66).

FYI, I have attached some preliminary draft ACES comments, specific to Section 4 of the report. (These comments are subject to change and are also potential questions for the stakeholder's conference call with EPA on May 19, 2009 (2:30-3:30pm).

I plan to come to tomorrow's May 18, 2009 Board of Selectmen's meeting and look forward to answering any questions then.

Thanks!

Mary

Mary Michelman  
ACES

5/18/2009

Landfill Area Groundwater Pre-Design Results Report,  
WR Grace Superfund Site  
Dated April 1, 2009  
WR Grace submitted Section 4 of the report on May 15, 2009

Draft ACES Comments---so far...

(These comments are subject to change and are also potential questions for the stakeholder's conference call with EPA on May 19, 2009 (2:30-3:30pm).

#### **A. Overall comment**

##### **1. Mass removal, cleanup time**

Please take additional steps, (including additional extraction wells?), to ensure that as much as possible of the most highly contaminated water is extracted and treated in both the Southwest and Southeast Landfill Areas. This will help to decrease the potential migration of the contaminants, as well as increase mass removal, and therefore should decrease the cleanup time, especially in the Southwest Landfill Area which is closest to the municipal drinking water wells.

Specifically, increased extraction yields in the immediate vicinity of SWLF-1, WLF, LF-19SBR, and LF-10, in the Southwest Landfill Area and SELF-1 and LF-06C in the Southeast Area would increase the recovery and treatment of contaminants. The three current extraction wells in these areas, WLF-1, SWLF-1 and SELF-1 have lower yields than anticipated. (MLF is located between these two areas and has lower contaminant concentrations than the other three extraction wells.) See Table below:

Extraction well	Expected yield (2007) gpm To achieve capture zones	Actual yield (2009) gpm p. 4-2 of 2009 Pre-Design Report
MLF	38	37.1
WLF	25	9.6
SWLF-1	20	4.2
SELF-1	8	1.3

Page 52 of the ROD states the following about the selected cleanup for the Southwest Landfill Area:

It would "...limit the migration of contaminated groundwater to the Assabet River and prevent the area between the Industrial Landfill and the Assabet River, for which remedial goals have been achieved, from becoming recontaminated. This alternative would reduce the time to achieve remedial goals from approximately 42 years under the Limited Action Alternative to approximately 23 years under the active treatment pumping scenario. For this reason, groundwater extraction in this area of the Site was included as a component of the Active Remediation Alternative."

#### **B. Specific comments on Section 4 Modeling Results---**

##### **2. Sensitivity Analysis of the recalibrated groundwater model**

Please provide a Sensitivity Analysis for the recalibrated groundwater model. This is a standard analysis that should have a quick turnaround time, and provide important information, before further model-based decisions are made.

##### **3. Resampling request, monitoring well LF-19SBR, Attachment F**

The 2008 data for LF-19SBR are inconsistent with the annual data from the previous eight years. The VDC concentration is an order of magnitude lower than in the prior sampling. (approx. 520 to 680 ug/L vs. 58 ug/L in 2008. (See Groundwater Quality versus Time Graphs in Attachment F.) Please resample well LF-19SBR asap.

##### **4. LF-19SBR; 2008 anomalous data, Figures 4-19 and 4-21**

Were the 2008 data from LF-19SBR data used in the recalibration of the model? Figure 4-21 seems to depict the 2008 VDC concentration in LF-19SBR of 58ug/L (see yellow contour), -- an order of magnitude lower than that detected annually in the previous eight years. See also Figure 4-19 which incorporates the 2008 data, and Attachment F, Groundwater Quality Versus Time Graphs. It appears from these figures that the 2008 data were included in the model modifications, and yet the text on page 4-4 discusses the 2007 data, and does not mention the 2008 data.

Given that the 2008 data from LF-19SBR appear anomalous, it seems inappropriate to use that data in the recalibration, prior to a resampling of the well, especially if that data change has a measurable effect on the model and the model calculated capture zones.

**5. Modeled vs. observed contamination levels in critical wells, pp. 4-4 to 4-5; and Attachment F.**

There are discrepancies in the modeled versus observed contaminant concentrations in critical wells. The text provides comparisons between modeled concentrations and those observed in 2007.

**a. MLF---**The model **overestimates** the VDC levels in this recovery well. (88 ug/L modeled vs. 4.6ug/L observed.) MLF has the highest yield of the four LF Area recovery wells, so a discrepancy has a greater impact at this well.

**b. LF-10 and LF-19SBR ----**The model **underestimates** VDC levels in these wells which are within the most contaminated portion of the VDC plume. (196 ug/L modeled vs. 280 ug/L observed at LF-10. 192 ug/L modeled vs. 520 ug/L observed at LF-19SBR.)

**c. LF-06----** The model **underestimates** benzene levels in this well which is within the most contaminated portion of the benzene plume. (600 ug/L modeled vs. 1800 ug/L observed.)

Could these discrepancies lead to the model overestimating the potential effectiveness of the current recovery well system? (ie. result in predicting less contamination in these critical areas than actually exists, and predicting more recovery/treatment than will actually occur?)

Please adjust the model to eliminate or minimize these discrepancies.

**6. Southeast Landfill Area, p. 4-9, Figures 4-16 to 4-20, and 4-22**

The yield at the recovery well in the Southeast Area, SELF-1 is very low, only 1.3gpm and the capture zone in this area is minimal. Pumping at nearby recovery well ELF was recently discontinued, adding to the changing dynamics in the area. Please take steps to increase the extraction/containment of benzene in this area.

**More comments to come....**